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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,184	08/25/2003	Amlan Datta	BALDS2.37AUS1	5153
20995	7590	01/11/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			LE, HOA T	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			1773	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,184

Applicant(s)

DATTA ET AL.

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03 & 07/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 15, 18, 20, 21 and 27 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a microsphere comprising aluminosilicate in its components, does not reasonably provide enablement for microspheres that are free of aluminosilicate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The specification provides no guidance or descriptions as to how to make microspheres other than those contain aluminosilicate in their composition. Specifically, the specification provides no teaching as to the suitable starting materials, the appropriate blowing agent necessary for formation of the microsphere wall, and processing conditions under which microspheres that are free of aluminosilicate can be formed. Therefore, claims 15, 18, 20, 21 and 27, which fail to include the limitation of aluminosilicate as the at least component in the claimed microsphere, are deemed to be broader than the enabling scope of the disclosure.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-22 and 24-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al (US 4,937,210).

Claim 1: Jones et al teach hollow aluminosilicate microspheres having a spherical wall being substantially free of alkali metal ions (thus free of alkali metal oxide). See col. 2, lines 43-60 and col. 3, lines 1-4. The particle size of the microsphere is at least 20 nm (col. 5, lines 20-22). The spherical wall also comprises at least one pre-selected material, a viscosifying agent (see col. 3, lines 33-38).

Claim 2: The viscosifying agent is functionally equivalent to the claimed blowing agent as it is responsible for the formation of the shell (col. 3, lines 33-38).

Claim 3: See col. 3, lines 50-59.

Claim 4: See col. 5, lines 40-44.

Claims 5 and 6: See claims 2 and 3 above.

Claim 7: See col. 3, lines 1-4 and col. 4, lines 60-64.

Claim 8: See col. 5, lines 12-15.

Claim 9: See col. 5, lines 20-22.

Claim 10: Because the wall is spherical, its aspect ratio has to be substantially 1.

Claim 11: See col. 5, lines 22-24.

Claims 12-13: Because the microsphere taught by Jones comprises a spherical wall having the same components, the same wall thickness, and the same wall diameter as those of the claimed microsphere as discussed in the rejection to claims 1-11 above, it is necessarily

inherent that the microsphere taught by Jones possesses the same density as that of the claimed microsphere.

Claim 14: See col. 3, lines 10, 12, 14-16 and 31-32.

Claims 15-18: See rejections to claims 1-6.

Claim 19: See col. 3, lines 30-32 where a specific shell of cordierites of formula $2\text{MgO} \cdot 2\text{Al}_2\text{O}_3 \cdot 5\text{SiO}_2$ is disclosed. In this case, the mass ratio of silica to alumina is $[5(28 + (2 \times 16))]/[2((2 \times 27) + 48)] = 300/204$ which is larger than one, and thus the mass ratio of silica to alumina is greater than unity.

Claims 20-21: See col. 5, lines 18-22.

Claim 22: See col. 4, lines 15-20.

Claims 24-33: See rejections of claims 1-13.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al (US 4,937,210) as applied to claims 15-22 above, and further in view of the discussion below.


Jones discloses the claimed invention as discussed above. Though Jones doesn't specify fly ash as the starting material for the aluminosilicate particle, Jones lists starting materials including pyrophyllite (see col. 3, lines 14-15) which is the same class as fly ash;

therefore, it would have been obvious for one having ordinary skill in the art to utilize fly ash as the starting material because Jones teaches that any of the precursors for aluminosilicate are equivalent as starting material. Furthermore, commercially available cenospheres are derived from fly ash. For example, see US Patent 6,506,819 to Shukla, at col. 3, lines 48-50. Thus, using fly ash as the starting material for aluminosilicate would have been obvious as conventional application.

6. References not relied upon are cited as art of interest.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


H. T. Le
Primary Examiner
Art Unit 1773